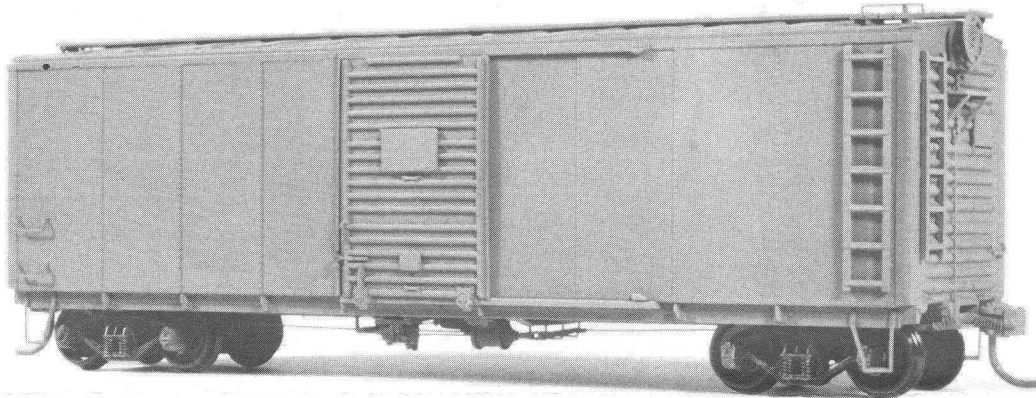


USRA BOXCAR STEEL SIDED REBUILD

KIT #4028



INTRODUCTION

One popular approach to the demand for larger and stronger freight cars was to rebuild existing rolling stock, using commercial "off-the-shelf" steel components, brake gear and improved trucks. This kit is typical of the many thousands of USRA designed single-sheathed box cars that were rebuilt in this manner.

Simply put, the original wood sheathing was removed and the sides replaced with steel sheathing applied over the outside bracing, resulting in increased cubic capacity. Additionally, the roof was replaced, and the ends modified to adapt to the extra width. The original Type K brake gear, if not already replaced, was removed in favor of the improved Type AB system, which of necessity required new mounting brackets.

Additional up-grades included the AJAX brake housing and steel roofwalks. In every respect, these were "new" cars converted from earlier successful designs, with but the skeleton remaining.

These cars were the prototypical "kit-bashing" project, and few were similar. Our kit features the metal roof and modified ends with steel ladders all around. The upgrade also includes the Westinghouse® Type AB brake system with necessary mounting brackets.

These cars make an exciting and quite common addition to any fleet. A special decal sheet for this kit is available direct from TICHY TRAIN GROUP for \$2.50, and other decals are available from your dealer to recreate your favorite prototype.

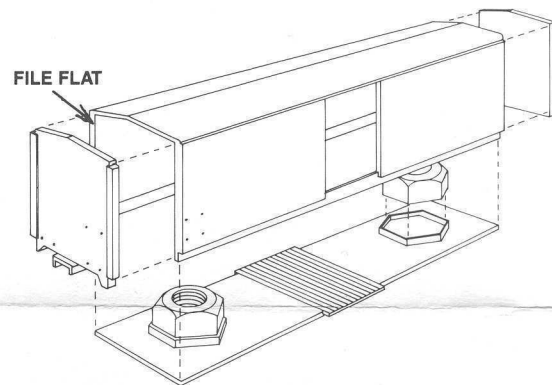
PLEASE READ BEFORE ASSEMBLY

Each part is attached to the main "sprue" by a small "gate" — when removing a part, first cut close to the sprue, then clean up the gate on the part. Use a SHARP modeler's knife or single edge razor blade. Do not twist the part off! To avoid confusion, remove parts only when called for in the instructions.

We recommend only 'liquid cement for plastics' for assembly, with ACC for metal-to-plastic assemblies. Test fit each part prior to cementing to see where solvent should be applied, then do so with a small pointed brush — allow cement to 'draw' into joint by capillary action.

Because of the number of small parts, clean your workspace, and provide adequate lighting — work over a sheet of white typing paper for contrast. So let's get started . . .

1 CARBODY ASSEMBLY

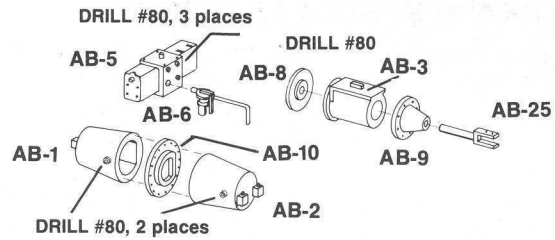


- 1) Trim small sprue from roof, lightly flatten roofwalk supports with a large flat file.
- 2) File ends of body flat; make sure they are square.
- 3) Test fit FLOOR to BODY, check length. Trim edges of protruding "wood" deck to fit door opening.
- 4) Cement WEIGHTS in place with ACC or epoxy.
- 5) Cement FLOOR to BODY, ensure floor is properly located.
- 6) Cement B (#1) end to body, noting engraved "B" on floor and end.
- 7) Cement #2 end to body. Allow assembly to dry.
- 8) Drill #80 for grabirons as indicated.

2 BRAKE COMPONENTS

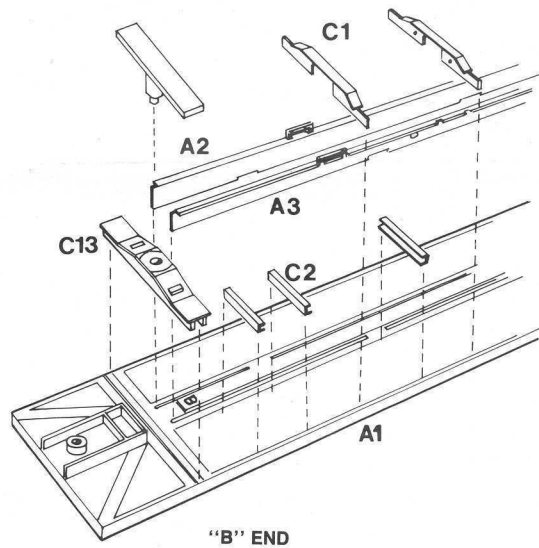
The AB brake sprue contains parts that will not be used for this kit, but are useful for other projects. Carefully identify the appropriate parts from the drawing — the various special brackets are included on the centersill sprue.

- 1) Assemble RESERVOIR and BRAKE CYLINDER
- 2) Drill #80 as noted. Set parts aside . . .



3 UNDERFRAME ASSEMBLY

- 1) Cement *one* BODY BOLSTER C-13 in place, with small brake rod locators facing toward center of car.
- 2) Cement CENTER SILLS in place, noting that locators are provided for orientation, and flange faces out.
- 3) Cement other BODY BOLSTER C-13 in place.
- 4) Ream two holes in DOOR CROSSBEARERS C-1 .025 to clear trainline.
- 5) Install DOOR CROSSBEARERS as follows: Carefully insert crossbearer into brake lever retainer straps molded on center sills, then rotate into position. Install other crossbearer.
- 6) Install 10 CROSS SILL CHANNELS C-2 as shown — flanges face center of car except CENTER channel, which faces the B end.
- 7) Bend and cut TRAINLINE as shown, feed thru holes and secure with ACC cement. The far end should be cemented just under the flange of bodybolsters.
- 8) ASSEMBLY FEET C-14 are provided to allow you to work on the rest of the model without damaging underbody — simply press them into the body bolster holes.

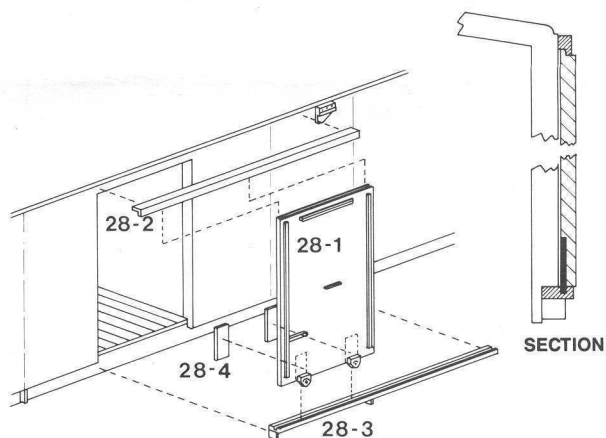


4 DOOR DETAIL

Note: The doors operate, or may be cemented in position to suite.

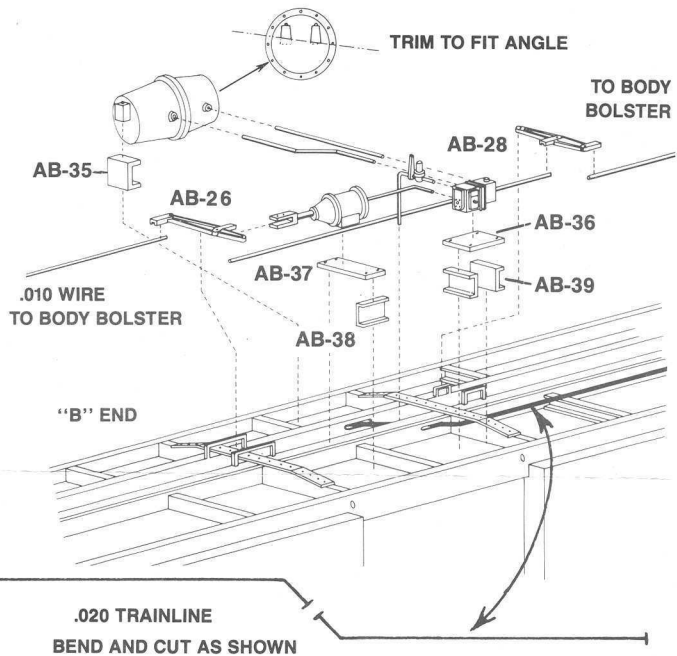
- 1) Carefully remove DOORS from runner; do not remove thin edge at top of door, as this slides in the upper door guide.
- 2) Cement thin LOWER DOOR SLIDE TABS into recessed areas on back of door, making sure door will slide smoothly in LOWER DOOR GUIDE slot.
- 3) Cement UPPER DOOR GUIDE against carbody, butting against doorstop.
- 4) Cement LOWER DOOR GUIDE against carbody — note locator pins.
- 5) When cement has dried, gently bend door, snap into guides.

Optional: attach tackboards 28-5 and/or 28-6 to door — see photos for location.



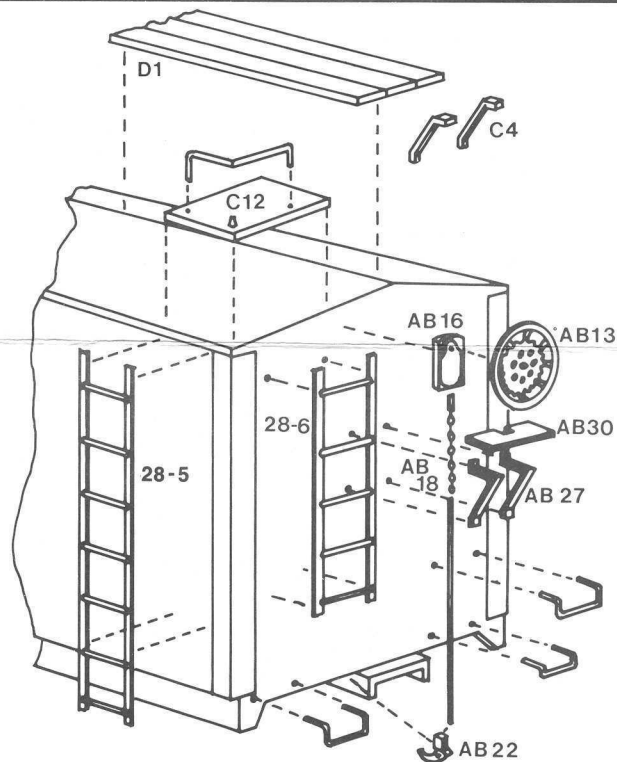
5 BRAKE SYSTEM ASSEMBLY

- 1) Cement RESERVOIR BRACKET to RESERVOIR—Trim two mounting lugs as shown to fit angle of door crossbearer flange.
- 2) Cement TRIPLE VALVE BRACKET to two VALVE MOUNTING CHANNELS as shown—Cement TRIPLE VALVE to assembled bracket.
- 3) Cement BRAKE CYLINDER BRACKET to MOUNTING CHANNEL—cement BRAKE CYLINDER to assembly. (Study photo for location).
- 4) Again, study photo—Cement RESERVOIR, TRIPLE VALVE and BRAKE CYLINDER in place; run .010 air lines while doing so . . .
- 5) Cut overlong length of .010 brake rod wire, ACC into outboard clevis of LONG LEVER AB-26—length must extend to B end body bolster. Trim to length on assembly.
- 6) Insert BRAKE LEVER AB-26 into lever retainer straps, cement into brake cylinder clevis. Cut overlong length of wire for center brake rod, ACC into center clevis of lever. Trim to length just prior to Step 7.
- 7) Cement SHORT BRAKE LEVER AB-28 to top of pivot strap, and under support strap—study photo.
- 8) Cut lengths of brake rod to fit between center clevises, and from end clevis to A end body bolster—ACC in place.
- 9) Carefully bend branch line pipe of DIRT COLLECTOR AB-6, cement short stub into Triple valve, with bend segment extending to TRAINLINE, between centersills.



6 AJAX BRAKE GEAR ASSEMBLY

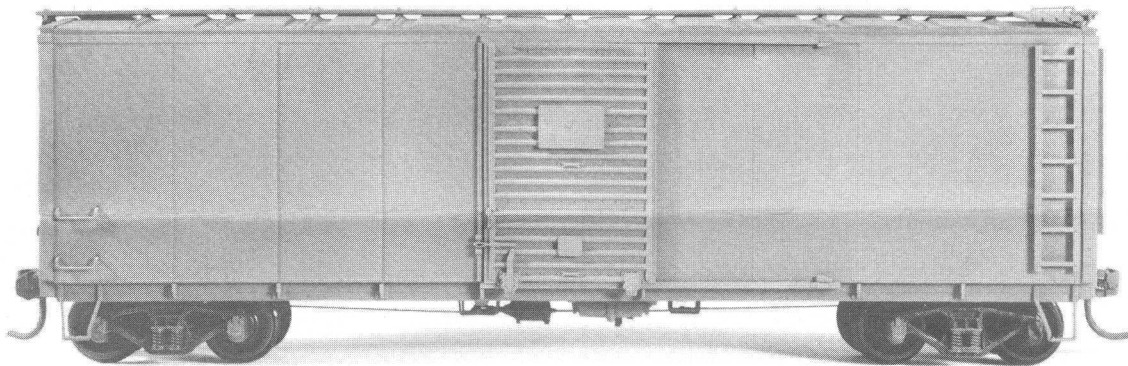
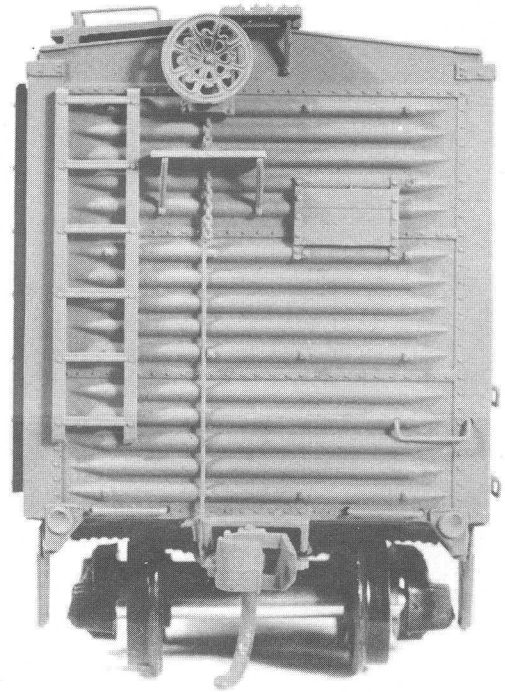
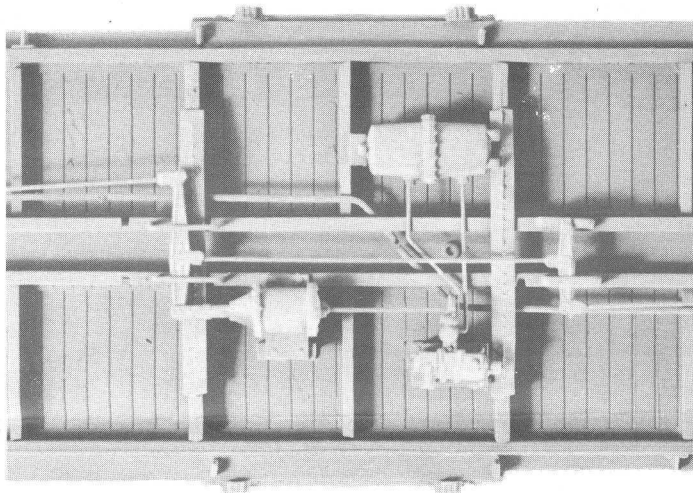
- 1) Cement CHAIN AB-18 into recess molded in back of AJAX BRAKE HOUSING AB-16.
- 2) Cement two PLATFORM SUPPORTS AB-27 into holes molded on the B end.
- 3) Cement PLATFORM AB-30 to supports.
- 4) Run chain thru molded slot, cement AJAX housing in place.
- 5) Cement ROCKER AB-22 against coupler pocket, in line below chain. Note: it may be necessary to trim slightly for alignment.
- 6) Cement short length of .010 wire between chain and rocker.



7 FINAL ASSEMBLY

- 1) Install GRABIRONS as shown, as well as the two on the side, opposite end of car from illustration.
- 2) Install SHORT LADDER on end, noting molded locator pins.
- 3) Install SIDE LADDERS as shown. Optional: GRABIRONS are also appropriate; drill to suit.
- 4) Cement AJAX BRAKE WHEEL in place.
- 5) Cement TACKBOARDS C-3 in place at each (not illustrated, see photo for location).
- 6) Cement ROOFWALK and ROOFWALK PLATFORMS in place.
- 7) Cement ROOFWALK SUPPORTS C-4 under roofwalk ends, against carbody.
- 8) Cement PLATFORM HANDGRABS in place with ACC.

- 9) The STIRRUP STEPS are molded in unbreakable plastic—Drill for a press fit at proper locations, then press in place with a drop of ACC.



After paint and decals, install TRUCKS with 2-56 screws provided.

KIT 4028

If you should irreparably damage or lose a part it will be replaced without charge. Please return the part(s) to us with \$1.50 for shipping and handling — a replacement will be sent immediately. And, do drop us a line, we enjoy hearing from you with ideas, comments and suggestions for new products.

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